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ABSTRACT

It is hypothesized that students who have a high regard for higher education and whose family and peer group echo this sentiment will be less likely to drop out than those with less regard. To test this hypothesis, 147 students entering Grand Valley State Colleges for fall 1977 were surveyed. The survey instrument consisted of 28 statements to which the student was asked to respond using a five-point scale ranging from "I strongly agree" to "I strongly disagree." The statements in the survey and the distribution of the 147 responses are shown. (SPG)

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Results of Attitude Survey of
New Students for Fall, 1977

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Office of Institutional Analysis

R. Bruce Tweddale

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Report #82

HE 010132

Background

The Retention Committee which was formed in 1976 expressed great interest in directing efforts toward improving our ability to predict a potential for "dropping out" among new students coming to GVSC.

Some preliminary work was done in the Spring of 1977 to see if we could identify some demographic factors which might correlate well with the potential for "dropping out." The demographic factors of admission status (whether entering as first-time freshman or transfer student), whether or not is major had been declared, how early the student applied for admission, the college to which the student was admitted, the age of the student, whether or not the student was a veteran, and marital status were all found to have some correlation with the "drop out" phenomenon. These factors were combined together using Discriminant Analysis and tested against students who were new to GVSC during Fall, 1975. The criterion used for "drop out" was that the student was not enrolled one or more of the following winter, spring, or fall terms.

This effort exhibited some discriminating power but was not efficient enough for practical use. Efficiency here being defined as maximizing the percentage of drop-outs and non-drop-outs accurately predicted.

At this point, it was decided to explore another factor which might be added to the demographic factors. This factor involves the attitudinal environment toward higher education from which the student comes.

A survey instrument was designed by the Office of Institutional Analysis to attempt to measure the attitudinal mindset of the entering student toward higher education and that of his family and his peers as perceived by the student.

The hypothesis was that students who have a strong educational orientation along with a good "intellectual ego," and come from a family and peer environment which values education and intellectual pursuits, will be less likely to "drop-out."

Methodology

The survey instrument consisted of twenty eight statements to which the student was asked to respond using a five point scale ranging from "I strongly agree" to "I strongly disagree." This survey instrument was designed to be a self-contained document which could be folded and returned using Business Reply Mail postage. (The survey instrument is Attachment #1).

As of 8/5/77, GVSC had admitted 1,676 new students for Fall, 1977. These students, along with their addresses, college, sex, marital status, and birth-date were copied from the Master Student Computer File to a special work file. A random selection of 205 students was drawn (non-replacement technique) from the group of 1,676. This represented a 12.2% sample.

The sample of 205 was then tested for randomness on college, sex, and marital status against the 1,471 in the group of 1,676 which were not drawn by the sampling technique. The Chi Square Test was used; the table of results are shown in attachment #2. In all three cases, the Chi Square was small enough to indicate that the distribution of the sample was not significantly different than the distribution of the rest of the population.

The mailing of the survey instrument to the 12.2% sample went out, along with a cover letter, by first class mail on 8/9/77. The first mailing resulted in 115 replies (56.1% response rate). A second mailing to the 90 non-respondents was made on 8/31/77. This brought in an additional 32 replies, bringing the total number of respondents up to 147 (71.7% response rate).

The group of 147 respondents was then checked for distribution on college, sex, and marital status against the 58 non-respondents. Again, the Chi-Square Test was utilized, with the tables appearing on attachment #3.

In the cases of distribution by college and sex, the Chi Squares were small enough to indicate that the two groups do not differ significantly. In the case of marital status, there is a 16% chance that the respondent group is skewed in favor of single students based on a Chi Square of 1.93300 with 1 degree of freedom (significance = .16443).

Results

The statements in the survey and the distribution of the 147 responses are shown below (SD = strongly disagree, D = disagree, U = undecided, A = agree, SA = strongly agree). The mean equals the average response score where (1 = SD, 2 = D, 3 = U, 4 = A, and 5 = SA).

<u>Statement</u>	<u>SD</u> (1)	<u>D</u> (2)	<u>U</u> (3)	<u>A</u> (4)	<u>SA</u> (5)	<u>Mean</u>
1. If I were to pull an "A" in a tough course, most of my friends would be pleased	2.7%	4.1%	5.4%	41.5%	46.3%	4.24
2. Many of my friends would put me down if I said I had to study when they wanted to do something else	33.3%	36.7%	7.5%	20.4%	2.0%	2.21
3. If they could get a really good job, most of my friends would drop out of school as soon as they could	14.3%	25.2%	27.2%	21.8%	11.6%	2.91
4. My parents had more formal education than most of their friends	25.9%	36.1%	20.4%	13.6%	4.1%	2.34

<u>Statement</u>	<u>SD</u>	<u>D</u>	<u>U</u>	<u>A</u>	<u>SA</u>	<u>Mean</u>
5. I think that the primary value of a college degree is that you learn more about both the world and yourself	2.7%	8.2%	14.3%	48.3%	26.5%	3.88
6. The major value of a college degree is that it helps a person get a better job	4.8%	20.4%	8.2%	40.1%	26.5%	3.63
7. I must study harder than other students in order to get a good grade in most courses	7.5%	32.7%	18.4%	27.2%	14.3%	3.08
8. My family places great value on education	0.7%	7.5%	9.5%	30.6%	51.7%	4.25
9. Most of the people in my crowd are more interested in getting a job than they are in getting a college degree	12.9%	26.5%	21.1%	22.4%	17.0%	3.04
10. I find that I can do well in my studies without any great effort	20.4%	38.1%	14.3%	25.2%	2.0%	2.50
11. Most of my friends are considered to be good students	4.8%	7.5%	16.3%	50.3%	21.1%	3.76
12. Most of my instructors have considered me to be one of their better students	1.4%	8.8%	29.3%	44.2%	16.3%	3.65
13. My parents very seldom read books or magazines	54.4%	28.6%	3.4%	8.8%	4.8%	1.81
14. I tend to study more than other students I know	7.5%	28.6%	29.9%	25.9%	8.2%	2.99
15. Not many of my friends expect to graduate from college	34.0%	26.5%	23.1%	9.5%	6.8%	2.29
16. I dislike working with numbers	32.0%	27.9%	12.9%	17.7%	9.5%	2.45
17. I would be really surprised if I walked into my best friend's house and found him/her reading a book	55.8%	21.1%	8.8%	8.2%	6.1%	1.88
18. Most people are "over-educated". They really have more education than is demanded by their job	35.4%	19.7%	22.4%	17.7%	4.8%	2.37

<u>Statement</u>	<u>SD</u>	<u>D</u>	<u>U</u>	<u>A</u>	<u>SA</u>	<u>Mean</u>
19. Many students attend college only because most of their friends do	15.6%	28.6%	22.4%	26.5%	6.8%	2.80
20. It was always taken for granted by my family that I would go to college	15.6%	17.0%	12.2%	25.9%	29.3%	3.36
21. My parents are/were opposed to increasing taxes for the support of schools	23.8%	20.4%	35.4%	10.9%	9.5%	2.62
22. Going to school is more fun than working	6.1%	12.9%	35.4%	27.9%	17.7%	3.38
23. I have always had difficulty with "story problems" in math courses	16.3%	27.9%	9.5%	29.3%	17.0%	3.03
24. Persons with a college degree seem to have a better life	6.1%	11.6%	28.6%	34.7%	19.0%	3.49
25. My family doesn't really care whether or not I do well in school	73.5%	19.7%	2.0%	2.7%	2.0%	1.40
26. I like to read for enjoyment and relaxation	6.1%	6.8%	6.8%	25.9%	54.4%	4.16
27. I think I am more intelligent than most of my fellow students	4.8%	17.0%	45.6%	27.9%	4.8%	3.11
28. I find it fairly difficult to write a composition or essay	22.4%	32.0%	11.6%	22.4%	11.6%	2.69

Analysis of Results

This author has hypothesized that students who have a high regard for higher education and whose family and peer group echo this sentiment, will be less likely to "drop-out" than will those with less regard.

It is further hypothesized that those from backgrounds with high regard for higher education will agree with items 1, 4, 5, 8, 10, 11, 12, 14, 20, 22, 24, 26, and disagree with the remaining items. If this second hypothesis is correct, we could then construct a "score" on this instrument which should have some relationship to the probability of dropping out of college for non-academic reasons. As a matter of interest, scores were calculated for the 147 respondents. For those survey items for which it was expected that students from a relatively "high regard" background would disagree, the actual numerical response was

reversed. In other words, if they strongly disagreed (responded with a 1), they were given a "score" of 5 on that item. Thus, if a given respondent "strongly agreed" with every positive item and "strongly disagreed" with every negative item, they would have a score of 5 on each of the 28 items. This results in a possible score range of 28-140. The actual distributions of the resulting scores are shown on attachment #4. The actual scores ranged from 73 to 113, with the mean equal to 94.48.

Chi Square Tests were run to see if any significant differences in scores existed at the 90% confidence level between colleges, sex, and marital status.

<u>Groups</u>	<u>Chi Square</u>	<u>Degrees of Freedom</u>	<u>Significant at 90% confidence level?</u>
Colleges	183.93	175	No
Sex	40.29	35	No
Marital Status	22.56	35	No

It can be seen that no significant differences were evident at the 90% confidence level in any of the comparisons which were done.

Another type of analysis which was done on the results for the 147 respondents was a Factor Analysis. Without going into a great deal of detail, this procedure analyzes responses, grouping together items which appear to be measuring the same "factor." It also indicates the strength of the contribution of each item to that factor. As a result of this analysis, it appears that this instrument is measuring eleven distinct factors as shown below. Included are the item numbers of the major contributing items along with an attempt to characterize the nature of the factor. The latter is quite difficult because the survey was not developed with the idea of creating factors. Rather, these are the factors which resulted.

<u>Factor #</u>	<u>Major Contributing Items</u>	<u>"Thrust" of Factor</u>
1	9, 15, 11	Peer intellectualism
2	7, 10, 14	Relative effort in studies
3	6, 24	Personal value of college education
4	8, 13	Family intellectualism
5	22	Personal educational enjoyment
6	1	Peer perception of "excellence"
7	16, 23	Mathematical orientation
8	17, 26	Personal & peer reading orientation
9	5	Personal liberal arts orientation
10	12, 27, 28	Personal intellectual evaluation & writing orientation
11	19, 20	Family & peer view of college experience

Items 2, 3, 4, 18, 21, and 25 do not appear to be making a major contribution to any of the eleven factors. The only surprise to this author in the grouping of

items by factor was in factor #10. Items 12 and 27 deal with the strength of the "intellectual ego," while item 28 deals with the difficulty of writing a composition or essay. It is interesting to note that a good correlation exists between the perceived ease with which writing can be done and "intellectual ego," while "mathematical orientation" stands by itself.

Comments on Results

The survey instrument seems to have produced a good spread of responses (average mean response of all items = 2.98) and appears to be measuring several different factors. The highest overall agreement was with item #8 (mean = 4.25), while the highest overall disagreement was with item #25 (mean = 1.40).

Next Steps

This report deals only with the development of the survey instrument and the results of its first use with a sample of applicants to GVSC for Fall, 1977.

The real purpose behind the development of the instrument was to see if it could measure some factors in the student's perception of himself and his family and peer environment which might have some relationship to the attrition phenomenon.

The next step will be to track the 147 respondents who actually enrolled for Fall, 1977. When we know which of those enrolled Fall, 1977, returned for Winter, 1978, and which did not, we can then use Discriminant Analysis techniques on their responses to the survey items to see if any combination of responses has the power to discriminate between continuing students and those who do not continue.

If we do find discriminating power in the survey results, this factor will be combined with those demographic factors which we have previously identified to see if the combination improves the efficiency of our ability to predict drop-outs.

The Office of Institutional Research at Grand Valley is currently investigating the relationship between the attitudes of students, their families, and their peers toward education and the probability of the student completing a college degree.

As a first step in this investigation, we are conducting a field test of the enclosed survey instrument on a selected sample of students who have been admitted to Grand Valley for the Fall of 1977.

Your name was randomly selected to be a part of this sample. Since we are conducting this field test on a relatively small sample, it is important that we receive as many responses as possible from the group selected. You will notice that the survey instrument is pre-numbered. This will allow us to mail out a follow-up letter to non-respondents and adjust our sample to account for students who do not return the survey to us. To be sure, this would also allow us to identify your response by name since we know to whom we mailed each of the numbered survey instruments. You may rest assured that we only will do this in order to carry out the research techniques. When the research procedures are completed, the forms will be destroyed. All responses will be treated in a confidential and professional manner.

Your response to the survey will be greatly appreciated and will enable us to learn more about students who start college and drop out before earning a degree. This task should take no more than ten minutes of your time.

When finished with the survey, please fold on the indicated dotted lines and then either tape or staple so that the Grand Valley address is visible. It can then be mailed 'as is'. No envelope or stamp is necessary.

Thank you in advance for you assistance!

R. Bruce Tweddale
Assistant Director
Office of Institutional Research

Please respond to each of the statements below. In each case, please read the statement and then indicate in the space to the left the number of the response which comes closest to reflecting your reaction to the statement. The number of your response should correspond to those shown below:

<u>Reaction</u>	<u>Response #</u>
I strongly agree. . . .	5
I somewhat agree. . . .	4
I'm undecided	3
I somewhat disagree . .	2
I strongly disagree . .	1

<u>Response #</u>	<u>Item</u>	<u>Statement</u>
_____	1.	If I were to pull an 'A' in a tough course, most of my friends would be pleased.
_____	2.	Many of my friends would put me down if I said I had to study when they wanted to do something else.
_____	3.	If they could get a really good job, most of my friends would drop out of school as soon as they could.
_____	4.	My parents had more formal education than most of their friends.
_____	5.	I think that the primary value of a college degree is that you learn more about both the world and yourself.
_____	6.	The major value of a college degree is that it helps a person get a better job.
_____	7.	I must study harder than other students in order to get a good grade in most courses.
_____	8.	My family places great value on education.
_____	9.	Most of the people in my crowd are more interested in getting a job than they are in getting a college degree.
_____	10.	I find that I can do well in my studies without any great effort.
_____	11.	Most of my friends are considered to be good students.
_____	12.	Most of my instructors have considered me to be one of their better students.
_____	13.	My parents very seldom read books or magazines.
_____	14.	I tend to study more than other students I know.
_____	15.	Not many of my friends expect to graduate from college.
_____	16.	I dislike working with numbers.

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<u>Response #</u>	<u>Item</u>	<u>Statement</u>
_____	17.	I would be really surprised if I walked into my best friend's house and found him/her reading a book.
_____	18.	Most people are 'over-educated'. They really have more education than is demanded by their job.
_____	19.	Many students attend college only because most of their friends do.
_____	20.	It was always taken for granted by my family that I would go to college.
_____	21.	My parents generally are/were opposed to increasing taxes for the support of schools.
_____	22.	Going to school is more fun than working.
_____	23.	I have always had difficulty with 'story problems' in math courses.
_____	24.	Persons with a college degree seem to have a better life.
_____	25.	My family doesn't really care whether or not I do well in school.
_____	26.	I like to read for enjoyment and relaxation.
_____	27.	I think I am more intelligent than most of my fellow students.
_____	28.	I find it fairly difficult to write a composition or essay.

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Tests for Randomness of Sample

1. College of Applicant

	<u>Sample</u> <u>%</u>	<u>Non-Sample</u> <u>%</u>	<u>Total</u> <u>N</u>
CAS	79.02%	79.67%	1,334
TJC	4.39%	3.81%	65
WJC	8.29%	8.16%	137
CIV	0%	1.16%	17
SGC	.49%	.61%	10
DSI	3.90%	4.42%	73
CED	3.90%	1.90%	36
CGS	0%	.27%	4
	<u>100.00%</u>	<u>100.00%</u>	<u>1,676</u>

Chi Square = 6.60165 with 7 degrees of freedom
Significance = .47150

2. Sex of Applicant

	<u>Sample</u> <u>%</u>	<u>Non-Sample</u> <u>%</u>	<u>Total</u> <u>N</u>
Male	48.78%	44.87%	760
Female	51.22%	55.06%	915
Bad Code	0%	.07%	1
	<u>100.00%</u>	<u>100.00%</u>	<u>1,676</u>

Chi Square = 1.23417 with 2 degrees of freedom
Significance = .53952

3. Marital Status of Applicant

	<u>Sample</u> <u>%</u>	<u>Non-Sample</u> <u>%</u>	<u>Total</u> <u>N</u>
Married	5.85%	6.19%	103
Single	94.15%	93.81%	1,573
	<u>100.00%</u>	<u>100.00%</u>	<u>1,676</u>

Corrected Chi Square = .00093 with 1 degree of freedom
Significance = .97562

Test of Respondents Versus Non-Respondents

1. College of Applicant

	<u>Respondents</u>	<u>Non-Respondents</u>	<u>Total</u>
	<u>%</u>	<u>%</u>	<u>N</u>
CAS	79.59%	77.59%	162
TJC	4.76%	3.45%	9
WJC	8.16%	8.62%	17
SGC	.68%	0%	1
DSI	4.76%	1.72%	8
CED	2.04%	8.62%	8
	100.00%	100.00%	205

Chi Square = 6.18731 with 5 degrees of freedom
Significance = .28842

2. Sex of Applicant

	<u>Respondents</u>	<u>Non-Respondents</u>	<u>Total</u>
	<u>%</u>	<u>%</u>	<u>N</u>
Male	47.62%	51.72%	100
Female	52.38%	48.28%	105
	100.00%	100.00%	205

Corrected Chi Square = .14027 with 1 degree of freedom
Significance = .70801

3. Marital Status of Applicants

	<u>Respondents</u>	<u>Non-Respondents</u>	<u>Total</u>
	<u>%</u>	<u>%</u>	<u>N</u>
Married	4.08%	10.34%	12
Single	95.92%	89.66%	193
	100.00%	100.00%	204

Corrected Chi Square = 1.93300 with 1 degree of freedom
Significance = .16443

Distribution of Hypothetical "Scores"
(By Decile)

<u>Decile</u>	<u>Score Ranges</u>
First Decile (90-99%ile)	104 - 113
Second Decile (80-99%ile)	102 - 103
Third Decile (70-79%ile)	98 - 101
Fourth Decile (60-69%ile)	96 - 97
Fifth Decile (50-59%ile)	95
Sixth Decile (40-49%ile)	93 - 94
Seventh Decile (30-39%ile)	91 - 92
Eighth Decile (20-29%ile)	88 - 90
Ninth Decile (10-19%ile)	83 - 87
Tenth Decile (1-9%ile)	73 - 82

Mean Score = 94.48
Median Score = 94.88
Mode = 93
Standard Deviation = 7.85
Number of cases = 147